

60,137-163
115-3189-U**AMENDMENT**

1-9. (CANCELLED)

10. (CURRENTLY AMENDED) A process of depositing a multi layer coating on at least a portion of an article surface comprising:

_____ depositing by electroplating at least one metal or metal alloy containing layer on at least a portion of said article surface;

_____ subjecting said article surface having said at least one electroplated layer thereon to pulses of air to dry and clean said electroplated article surface; and

_____ depositing by physical vapor deposition on at least a portion of said dry and clean electroplated layer at least one layer comprising a material selected from the group consisting of refractory metal, refractory metal alloy, refractory metal compound, and refractory metal alloy compound on at least a portion of said electroplated layer, wherein said refractory metal compound is selected from the group consisting of nitrides, carbides, carbonitrides, oxides and reaction products of said refractory metal, oxygen and nitrogen, and wherein said refractory metal alloy compound is selected from the group consisting of nitrides, carbides, carbonitrides, oxides and reaction products of said refractory metal alloy, oxygen and nitrogen, wherein the process of claim 1 wherein said electroplating comprises electroplating at least one layer comprised of copper on said at least a portion of the surface of said article to provide at least one electroplated copper layer, electroplating at least one layer comprised of nickel on said at least one electroplated copper layer to provide at least one electroplated nickel layer, and electroplating at least one layer comprised of chrome directly on said at least one electroplated nickel layer.

11. (PREVIOUSLY PRESENTED) The process of claim 10 wherein said at least one layer selected from refractory metal and refractory metal alloy is deposited by physical vapor deposition on at least a portion of said electroplated chrome layer.

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12. (PREVIOUSLY PRESENTED) The process of claim 11 wherein said refractory metal is selected from zirconium and titanium and wherein said refractory metal alloy is zirconium-titanium alloy.
13. (PREVIOUSLY PRESENTED) The process of claim 12 wherein said refractory metal is zirconium and said refractory metal alloy is zirconium-titanium alloy.
14. (PREVIOUSLY PRESENTED) The process of claim 13 wherein a sandwich coating comprised of alternating layers of zirconium or zirconium-titanium alloy, and zirconium nitride or zirconium-titanium alloy nitride is deposited by physical vapor deposition over said zirconium or zirconium-titanium alloy layer.
15. (PREVIOUSLY PRESENTED) The process of claim 14 wherein a zirconium nitride or zirconium-titanium alloy nitride layer is deposited by physical vapor deposition over said sandwich layer.
16. (PREVIOUSLY PRESENTED) The process of claim 15 wherein a zirconium oxide or zirconium-titanium oxide layer is deposited by physical vapor deposition over said zirconium nitride layer or zirconium-titanium alloy nitride layer.
17. (PREVIOUSLY PRESENTED) The process of claim 15 wherein a layer comprised of the reaction products of zirconium or zirconium-titanium alloy, oxygen and nitrogen is deposited by physical vapor deposition over said zirconium nitride layer or said zirconium-titanium alloy nitride layer.
18. (PREVIOUSLY PRESENTED) The process of claim 13 wherein a layer comprised of zirconium nitride or zirconium-titanium alloy nitride is deposited by physical vapor deposition over said zirconium or zirconium-titanium alloy layer.

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19. (PREVIOUSLY PRESENTED) The process of claim 18 wherein a layer comprised of zirconium oxide or zirconium-titanium alloy oxide is deposited by physical vapor deposition over said zirconium nitride or zirconium-titanium nitride alloy layer.

20. (PREVIOUSLY PRESENTED) The process of claim 18 wherein a layer comprised of the reaction products of zirconium or zirconium-titanium alloy layer, oxygen and nitrogen is deposited by physical vapor deposition over said zirconium nitride or zirconium-titanium alloy nitride layer.

21-67. (CANCELLED)